UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,918	01/29/2004	Yasuhiro Nonaka	P24875	2674

7055 7590 06/22/2005

GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER	
VAN, QUANG T	

ART UNIT	PAPER NUMBER
3742	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,918	NONAKA ET AL.	
	Examiner	Art Unit	
	Quang T. Van	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-21* is/are pending in the application.

4a) Of the above claim(s) *16-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-4, 6-15, drawn to a power apparatus for electromagnetic induction heating, classified in class 219, subclass 619.

II. Claims 16-21, drawn to a power apparatus, classified in class 399, subclass 88The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Group I and II are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects, as evidence, for example: the invention I differs from II as it requires a heat generating member to generate heat by electromagnetic induction; and the invention II is different from I as it requires a full-rectification circuit that rectifies a alternating voltage applied from an input terminal.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 16-21 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4 ,9 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Okabayashi (US 5,794,096). Okabayashi discloses an induction type heat fixing device comprising a heat generating member (90); and a power apparatus comprising: a switching unit (44) which supplies power to the exciting coil (90); a switching unit voltage detecting circuit (255) which detects that a voltage to be applied to the switching unit exceeds a safe operating voltage limit (col. 14, lines 54-62); and a control circuit (50) which controls a power to be supplied to the coil in response to a detection signal of the switching unit voltage detecting circuit (col. 14, lines 48-53).

8. Claims 5-8, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10301442A. JP 10301442A a heater for image forming apparatus having photo sensitive member (1, translated paper, par. 0045); a charger (2) which uniformly

charges a surface of the photosensitive member to have a predetermined electric potential (translated paper, par. 0046); exposing unit which irradiates scanning line of a light beam corresponding to image data on the charged photosensitive member (translated paper, par. 0047); developer (4) which develops the electrostatic latent images formed on the photosensitive member (translated paper, par. 0048); cleaner (16) which removes a toner remaining on the photosensitive member (translated paper, par. 0051); a power apparatus for electromagnetic induction heating means including a heat generating member (7) and an exciting coil (13) provided in the vicinity of the heat generating member (7) and serving to cause the heat generating member (7) to generate heat by electromagnetic induction (translating paper, par. 0052, lines 2-3), the power apparatus comprising a switching unit (105) which supplies a power to the exciting coil (13); a power apparatus input voltage detecting circuit (108) which detects that a commercial alternating voltage to be input to the power apparatus exceeds maximum rated input voltage of the power apparatus (translated paper, par. 0083 and 0084); and a control circuit (109) which controls a power to be supplied to the coil (13) corresponding to a detection signal of the power apparatus input voltage detecting circuit (translated paper, par. 0082 and 0083).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okabayashi (US 5,794,096) in view of Nanataki et al (US 5,881,349). Okabayashi discloses substantially all features of the claimed invention except photosensitive member, a charger which uniformly charges a surface of the photosensitive member to have a predetermined electric potential, exposing unit which irradiates scanning line of a light beam corresponding to image data on the charged photosensitive member, developer which develops the electrostatic latent images formed on the photosensitive member, cleaner which removes a toner remaining on the photosensitive member. Nanataki discloses, figure 6, photosensitive member (11, col. 1, lines 26-27), a charger (12) which uniformly charges a surface of the photosensitive member to have a predetermined electric potential, exposing (13) unit which irradiates scanning line of a light beam corresponding to image data on the charged photosensitive member, developer which develops the electrostatic latent images formed on the photosensitive member (col. 6, lines 9-12), cleaner (17) which removes a toner remaining on the photosensitive member (col. 6, lines 40-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Okabayashi photosensitive member, a charger which uniformly charges a surface of the photosensitive member to have a predetermined electric potential, exposing unit which irradiates scanning line of a light beam corresponding to image data on the charged photosensitive member, developer which develops the electrostatic latent images formed on the photosensitive member, cleaner which removes a toner remaining on the

photosensitive member as taught by Nanataki in order to permanent fix image on the recording medium surface.

Response to Amendment

11. Applicant's arguments filed 5/09/2005 have been fully considered but they are not persuasive.

Applicants argue that, in Okabayashi, "when the voltage exceeds a predetermined reference voltage, the detection circuit functions to turn OFF switching circuit, thus interrupting the current supplied to the induction heating coil 90, preventing over-heating. That is, OKABAYASHI discloses the stopping of the supply of current to the induction heating coil, whereas the present invention teaches limiting the power applied to the exciting coil". The Examiner disagrees. In Okabayashi, when the supply voltage exceed a limit (a predetermined reference voltage), the detection circuit 255, functions to stop (turn OFF) switching circuit 44, thus interrupting the current supplied to the induction heating coil 90, preventing over-heating. As same as Okabayashi, in the present application, the detecting circuit detects the supply voltage when it exceeds the limit (the safe operating voltage), the control circuit stops the supply of the power to the exciting coil (see claim 4 of present application).

Applicants also argue that Japanese document JP 10301442 "fails to discloses (or even suggest) detecting a rapid fluctuation of the inputted power source" recited on . REMARKS, page 12, lines 13-14. In amended claim 6, lines 12-13, claimed "input voltage detecting circuit which detects a shaft rising fluctuation in the commercial alternating voltage to be input to the power apparatus". As same as claim 6 of present

application, JP 10301442 discloses an inputted detection circuit (electrical-potential-detection mean 108), which detects a shaft rising fluctuation (the threshold voltage 74 is exceeded) in the commercial alternating voltage to be input to the power apparatus (translated paper, page 7, par. 0083).

12. Applicants further argue that "NANATAKI et al. fails to discloses or suggest Applicants manner of controlling electrical power used to effect the heating". The Examiner disagrees. Okabayashi discloses substantially all features of the claimed invention except photosensitive member, a charger which uniformly charges a surface of the photosensitive member to have a predetermined electric potential, exposing unit which irradiates scanning line of a light beam corresponding to image data on the charged photosensitive member, developer which develops the electrostatic latent images formed on the photosensitive member, cleaner which removes a toner remaining on the photosensitive member. Nanataki discloses, figure 6, photosensitive member (11, col. 1, lines 26-27), a charger (12) which uniformly charges a surface of the photosensitive member to have a predetermined electric potential, exposing (13) unit which irradiates scanning line of a light beam corresponding to image data on the charged photosensitive member, developer which develops the electrostatic latent images formed on the photosensitive member (col. 6, lines 9-12), cleaner (17) which removes a toner remaining on the photosensitive member (col. 6, lines 40-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Okabayashi photosensitive member, a charger which uniformly charges a surface of the photosensitive member to have a predetermined electric

potential, exposing unit which irradiates scanning line of a light beam corresponding to image data on the charged photosensitive member, developer which develops the electrostatic latent images formed on the photosensitive member, cleaner which removes a toner remaining on the photosensitive member as taught by Nanataki in order to permanent fix image on the recording medium surface. Further, Okabayashi and Nanataki are both on the same technical field image induction heating apparatus, therefore, one ordinary skill in the art would look into Nanataki's reference to combine with Okabayashi 's reference.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QV
June 16, 2005

Quang T Van
Primary Examiner
Art Unit 3742